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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,874	04/28/2006	Ippei Shake	290617US40PCT	6068
22850 7590 05/13/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER MANSOURY, NOURALI				
ART UNIT 2475		PAPER NUMBER		
NOTIFICATION DATE 05/13/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/577,874

**Applicant(s)**

SHAKE ET AL.

**Examiner**

NOURALI MANSOURY

**Art Unit**

2475

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15, 17-34, 36-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Swenson et al. (US 7304996), Sjoblom (US 2002/0009053) in view of Furukawa et al. (2007/0297393).

Regarding claim 1 and 2, Swenson et al. discloses a packet transfer method in a network apparatus that transfers packets, comprising: generating, using a sending side apparatus two packets, the packets being copied of a send packet (Fig. 1 element 106, FIG. 2 shows a block diagram of portions of the distributor of FIG. 1. FIG. 2 shows that the packet addressor of FIG. 1 includes receive components and transmit components); Providing, using the sending side apparatus, a sequence number identifying to each of the packets (col 31 lines 41-54), Providing, using the sending side apparatus, a first identifier corresponding to a first send/receive pair, to a respective one of the packets in order to send the packets, in the sending side apparatus, (col 26 lines 31-33); and receiving, using a receiving side apparatus the packets via two receiving units (Fig. 2 element 112); recognizing the first identifier, each of the first identifier corresponding to one of the first send/receive pairs (col 6 lines 33-38); identifying packets having the same information and the sequence based on the sequence number when the identifier

are the same (col 12 lines 48-59); selecting one of the packets to send the selected one of the packets downstream; and discarding the one of the packets which is not selected by the selecting; wherein only one of the packets is received by the receiving, only the received one of the packets is sent downstream (col 31 lines 30-41, col 35 lines 4-10, e.g., The command instruction can be, but is not limited to: nop, insert, delete, replace, replace\_mask, copy, copy\_mask, col 35 lines 4-10, e.g., The command instruction can be, but is not limited to: nop, insert, delete, replace, replace\_mask, copy, copy\_mask, tx\_acl, emc\_vpri, emc\_iptos, or an ALU insert or an ALU replace command tx\_acl, emc\_vpri, emc\_iptos, or an ALU insert or an ALU replace command, col 36 lines 36-49).

Swenson et al. does not disclose two copies, the same sending sequence, two receiving units. However, Sjoblom for example, from similar field of endeavor discloses two copies, the same sending sequence, two receiving units (Para 0002, 0064, 0024 lines 8-18, Fig. 5 element ES). Thus, it would have been obvious to one ordinary skill in the art at the time of invention to include two copies, the same sending sequence, two receiving units as taught by Sjoblom in the system of Swenson et al. wherein the method can be implemented in the Distributor). The motivation for including two copies, the same sending sequence, two receiving units as taught by Sjoblom being that to improve the quality of service in the communications network. Swenson et al. and Sjoblom do not explicitly disclose a second identifier corresponding to a second send/receiver pair, two routers which are different from each other. However, Furukawa et al. for example from similar field of endeavor discloses a second identifier corresponding to a second send/receiver pair, two routers which are different from each

other (Para 0031, Para 0030, e.g., a multicast-type IP network 27-1 for a transfer of from one source of delivery to a plurality of destinations, with reference to FIG. 10). Thus, it would have been obvious to one ordinary skill in the art at the time of invention to include a second identifier corresponding to a second send/receiver pair, two routers which are different from each other as taught by Furukawa et al. in the systems of Swenson et al. and Sjoblom, wherein the method can be implemented in the distributor. The motivation for including the second identifier corresponding to the second send/receiver pair, two routers which are different from each other as taught by Furukawa et al. is to improve the quality of services in the communications network.

Regarding claims 20 and 21, combination of Swenson et al., Sjoblom and Furukawa et al. disclose a packet transfer apparatus for transferring packets, comprising: sending function means comprising: copy means for generating two packets, the packets being copies from of a send packet; number/identifier providing means for providing a sequence number identifying the same sending sequence to each of the packets generated by the copy means, and for providing a first identifier corresponding to a first send/receive pair and second identifier corresponding to a first route, and a third identifier corresponding to a second send/receive pair and a fourth identifier corresponding to a second route, to each of the packets; packet sending means for sending, over two routing means which are different from each other the two packets to which the sequence number and the first, second, third and fourth identifiers are respectively provided; and receiving function means comprising: packet receiving

means for receiving the packets sent from the sending function means; a plurality of memories each for storing one of the two received packets; selection means for reading out the two packets stored in the memories, recognizing the first and third identifiers, each of the first and third identifiers corresponding to one of the first and second send/receive pairs and the second and fourth identifiers, each of the second and fourth identifiers corresponding to one of the first and second routes, for identifying packets having the same information and the sequence based on the sequence number when the first and third identifiers are the same, and for selecting one of the packets of the same sequence; and sending means for sending the one of the packets selected in the selection means downstream, and discarding the one of the packets which is not selected by the selection means, wherein, when only one of the packets of the same sequence is received by the packet receiving means, only the received one of the packets is sent downstream (see claim 1).

Regarding claims 3 and 22, Swenson et al. discloses wherein the receiving side apparatus temporarily stores the two packets transferred from the first and second routes into two FIFO memories respectively, and selects one of the packets which was transferred normally to transfer downstream (col 5 lines 51-52, col 32 line 16).

Regarding claims 4 and 23, Swenson et al. discloses wherein the receiving side apparatus temporarily stores the two packets transferred from the first and second routes into two circulating hash memories respectively, and selects one of the packets

which was transferred normally to transfer downstream (col 25 lines 26-28, col 29 lines 60-67).

Regarding claims 5 and 24, Swenson et al. discloses wherein the receiving side apparatus temporarily stores the two packets transferred from the first and second routes into two FIFO memories respectively, and selects one of the packets which was transferred normally using a third memory shared by the two receiving units so as to transfer the selected one of the packets downstream (col 5 lines 51-52, abstract).

Regarding claims 6 and 25, Swenson et al. discloses wherein Ethernet is used as a packet transfer technology (col 11 lines 37-40).

Regarding claims 7 and 26, Swenson et al. discloses wherein a tag field and a counter field are inserted following a source MAC address in an Ethernet packet so as to write a VLAN tag corresponding to the first or second route and the sequence number (column 11 lines 55-61).

Regarding claims 8 and 27, Swenson et al. discloses wherein a tag field and a counter field are inserted following a source MAC address in an Ethernet packet so as to write a VLAN tag corresponding to the first or second send/receive pair and the sequence number (col 23 lines 10-19, col 13 lines 29-33, col 12 lines 5-10).

Regarding claims 9 and 28, Swenson et al. discloses wherein a tag field and a counter field are inserted following a source MAC address in an Ethernet packet so as to write a VLAN tag corresponding to the first or second send/receive pair and a sending route and write the sequence number (col 23 lines 10-19, col 13 lines 29-33, col 12 lines 5-10).

Regarding claims 10 and 29, Swenson et al. discloses wherein a tag field and a counter field are inserted following a source MAC address in an Ethernet packet so as to write a VLAN tag corresponding to the first or second sending route, an identifying ID corresponding to the first or second send/receive pair, and a sequence number (col 23 lines 10-19, col 13 lines 29-33, col 12 lines 5-10, col 31 lines 30-40).

Regarding claims 11 and 30, Swenson et al. discloses wherein MPLS is used as a packet transfer technology (col 31 lines 30-40).

Regarding claims 12 and 31, Swenson et al. discloses wherein a tag field and a counter field are inserted before a shim header of MPLS so as to write a shim header corresponding to the first or second sending route, and the sequence number (col 12 lines 11-20).

Regarding claims 13 and 32, Swenson et al. discloses wherein a tag field and a counter field are inserted before a shim header of MPLS so as to write a shim header



corresponding to a send/receive pair, and a sequence number (col 23 lines 10-19, col 12 lines 11-20).

Regarding claims 14 and 33, Swenson et al. discloses wherein a tag field and a counter field are inserted before a shim header of MPLS so as to write a shim header corresponding to a sending route, an identifying ID corresponding to the first or second send/receive pair, and the sequence number (col 23 lines 10-19, col 13 lines 29-33, col 12 lines 5-10, col 31 lines 30-40).

Regarding claims 15 and 34, Swenson et al. discloses wherein a tag field and a counter field are inserted before a shim header of MPLS so as to write a shim header corresponding to a sending route and the first or second send/receive pair, and the sequence number (col 23 lines 10-19, col 13 lines 29-33, col 12 lines 5-10, col 31 lines 30-40).

Regarding claims 17 and 36, Swenson et al. discloses wherein a packet transfer technology utilizing encapsulation of a variable-length packet is used (col 19 lines 36-45).

Regarding claims 18 and 37, Swenson et al. discloses wherein, when providing a header to the variable-length packet for encapsulation, a counter field is inserted after the header for encapsulation so as to write the sequence number (col 12 lines 28-33).

Regarding claims 19 and 38, Swenson et al. discloses wherein the receiving side apparatus extracts the first or third identifier corresponding to the first or second send/receive pair or the second or fourth identifier corresponding to the first or second route from the header for encapsulation (col 11 lines 55-60, col 13 lines 22-28).

3. Claims 16 and 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Swenson et al. (US 7304996), Sjoblom (US 2002/0009053) in view of Furukawa et al. as applied to claim 1, or claim 2, or claim 20, or claim 21 and further in view of Ramakrishnan (US 2003/0018689).

Regarding claims 16 and 35, Swenson et al. discloses wherein a region of each memory using the circulating hash is divided into, when the receiving side-apparatus receives a packet, the receiving side apparatus stores the packet in a memory region of an address that is a remainder of a counter value when divided (col 10 lines 23-35, col 19 lines 28-34), even when a packet having prior to a packet having, the packet is once stored in the memory region of the address that is the remainder, and when reading out the packet, the packet is read out in the order of the counter value, so that reversal of arriving sequence within  $n$  is corrected to a correct sequence when reading out the packet (col 23 lines 21-27, col 6 lines 4-23, col 8 lines 48-56). Swenson et al. does not disclose  $n$  ( $n$  is an integer no less than 2) to which addresses  $1-n$  are assigned, a counter value of  $N$  arrives, a counter value of  $N-n$ , the counter value  $N$  when divided by  $n$ . However, Ramakrishnan for example, from similar field of endeavor discloses  $n$  ( $n$  is an integer no less than 2) to which addresses  $1-n$  are assigned, a

counter value of  $N$  arrives, a counter value of  $N-n$ , the counter value  $N$  when divided by  $n$  (Para 0074 lines 1-5). Thus, it would have been obvious to one ordinary skill in the art at the time of invention to include  $n$  ( $n$  is an integer no less than 2) to which addresses  $1-n$  are assigned, a counter value of  $N$  arrives, a counter value of  $N-n$ , the counter value  $N$  when divided by  $n$  as taught by Ramakrishnan in the system of Swenson et al. wherein the method can be implemented in the Distributor. The motivation for including  $n$  ( $n$  is an integer no less than 2) to which addresses  $1-n$  are assigned, a counter value of  $N$  arrives, a counter value of  $N-n$ , the counter value  $N$  when divided by  $n$  as taught by Ramakrishnan is that hashing is used to convert an identifier or key, meaningful to a user, into a value for the location of the corresponding data in a structure, such as table in the communications network.

Swenson et al., Sjoblom and Ramakrishnan disclose all subject matter of the claim invention with the exception of the addresses  $1-n$  and a counter value of  $N-n$ . However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Swenson et al., Sjoblom and Ramakrishnan disclose the counter value and the hash is

divided into  $n$  ( $n$  is an integer), it would have been obvious to one of ordinary skill in the art at the time of invention to have any counter value of  $N-n$  and addresses including  $1-n$ , absent a showing of criticality by applicant.

***Response to Remarks***

4. This communication is considered fully responsive to the Amendment filed on 01/27/2010.
  - a. Previous objections to the claims have been withdrawn since it has been amended accordingly.
  - b. Previous rejections to the claims under the second paragraph of 35 U.S.C. 112 have been withdrawn since it has been amended accordingly.

***Response to Amendment***

5. Applicant's arguments with respect to claims 1-2, 20-21 have been considered but are moot in view of the new ground(s) of rejection.
6. Applicant's argument, with regards to claims 1-2, 20-21, filed 01 January 2010 have been fully considered but they are not persuasive.
7. On page 31-32 of the applicant's response, applicants contend that However, as was discussed in the interview, the combination of Swenson and Sjoblom does not describe or suggest providing, using the sending side apparatus, a first identifier corresponding to a first send/receive pair and a second identifier corresponding to a second send/receive pair, to a respective one of the packets in order to send the packets over two routers, in the sending side apparatus, which are different from each

other, or identifying packets having the same information and the sequence based on the sequence number when the first and second identifiers are the same, selecting one of the packets of the same sequence so as to send the selected one of the packets downstream, and discarding the one of the packets which is not selected by the selecting, where when only one of the packets of the same sequence is received by the receiving, only the received one of the packets is sent downstream, as recited in claims 1-2, and 20-21.

8. The examiner respectfully disagrees with applicant's arguments, because see the rejection of claims 1-2 and 20-21.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOURALI MANSOURY whose telephone number is (571)270-5671. The examiner can normally be reached on Monday-Thursday, 12:00-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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